

**Submission Id: 3927**

**Title**

*Patient perspectives on utilizing clinical decision support for high blood pressure control*

**Priority 1 (Research Category)**

Patient engagement

**Presenters**

Michelle Bobo, BA, MS, David Dorr, MD, MS, Anthony Cheng, MD, Christopher d'Autremont, , MBI, Christopher Terndrup, MJ Dunne, MA, Robert Rope, MD, Joshua Richardson, PhD, MLIS, MS

**Abstract**

Context: High blood pressure (HBP) affects nearly half of adults in the United States and is a major factor in heart attacks, strokes, kidney disease, and other morbidities. Many primary care guidelines exist for reducing risk, including several related to patient behaviors such as home monitoring and lifestyle changes. Patient-facing, primary care-based clinical decision support (CDS) tools may help patients adhere to evidence-based recommendations, but a deeper understanding of their motivations and preferences will be necessary to succeed.

Objective: Understand how to best engage patients in controlling their HBP, in order to design effective patient facing CDS tools.

Population Studied: Adults between the ages of 18 and 85 who had been diagnosed with hypertension.

Study Design: Mixed methods study with two phases: (1) 18 semi-structured interviews with a limited cohort; and (2) a nationwide online survey of 519 people.

Instrument: Both the interviews and the survey included questions assessing comorbid conditions, medication load, treatment priorities, satisfaction with BP management goal-setting, and attitudes towards CDS. The survey also included a set of dichotomous (A/B) preference questions using paired information displays to assess perceived trustworthiness of potential CDS user interface options and likelihood of initiating patient action.

Analysis: Interview responses were summarized using descriptive statistics with content analysis on the open-ended questions. Survey questions using a 7 point Likert scale were summarized by percent responding in the top 3 categories. A/B preference displays were analyzed with a sign test and categorical responses about likelihood of taking action were compared using a chi-squared test at the  $p=0.05$  level.

Results: Patients knew their BP goals, and identified that behavioral and lifestyle changes were important and underutilized. Social-relational and higher information displays were perceived as more trustworthy (55-60% vs. 16-26%) but did not change reported actions (75%).

Conclusions: Our survey results suggest that patients perceive they would act on information and recommendations displayed by a CDS tool; however, significant previous work has shown that people tend to over-estimate their own actions. A first version of the CDS tool has been developed, and the next steps include testing the visualizations, reminders, and tailored messages in the real world through a pragmatic trial.